

Phylophilic ESSAY,

Treating Of
The most Probable Cause of that
Grand Mystery of Nature,

THE
Flux & Reflux:

OR,
Flowing and Ebbing of the

SEA.

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A
PACIFIC GOLD
AUGUST



A.F.G.



To the Learned and Judicious,
Sir JOHN MARSHAM.

W^HBOORNES - Place in Kent, Knight
and Baronet, one of the Six
Clerks of His Majesties High
Court of Chancery.

SIR,

When the Sun opens the
Curtains of the East,
and Guilds and En-
amels the Fringes of
the Firmament, with
his early Beams, the lesser Lights re-
signe themselves up to his, and Muffle

The Epistle Dedicatory.

themselfe up in their own Observations
in being vanquish'd with an excess of
Splendor; so the meaner and pettier
Censures shall look faint and dim, if
You, that are the great Luminary in
the Orb of Learning, shall shed a pro-
pitious Beam and Influence upon
this Crude Essay, which will not only
rescue it from the Virulence of Detrac-
tion, but so foment and improve
it, that it will Bourgeon and Flourish
under your Protection; So that though
it owe its Birth to my Pen, it
will Entitle its Verdure and Per-
fection to your Candid Acceptance
of it; Now it is offer'd up to Yours,
from the bands of him, who is,

SIR,

Your most Affectionate

Servant,

Thomas Philipot.



A Brief

DISCOURSE OF THE Most Probable Cause of that Grand *Mystery of Nature,*

The Flux & Retentur of the SEA.

Here is a huge Variety of Opinions, that Entitle themselves to have unwind the cause of this Grand Mystery of Nature, *The Flux and Retentur of the Sea*. But they are erected upon untenable Principles, and so entwin'd and Complicated, that I may say of them, as Florus did of the Mountainous Inhabitants of the Alpes, *Pluris erat Invenire quam Vincere*, it is a greater Difficulty to trace out, and unrawell them, than to Subvert, or Dismantle them.

The

The First Opinion, Is,

OF *Leonardus Leffius*, who affirms, That the Motion of Reciprocation or Replication, commonly styl'd, *The Flux and Reflux of the Sea*, Entitles its Primitive and Original Causality, to the Supernaturall Guidance and Managery of an Angel; But if the strength of Man be seen in his Reason, and the strength of Reason evidenced in his Judgment, and the strength of Judgment manifested in his Knowledg, all these Three by this frail Opinion must be destroyed; for, who will ever Attemp by a noble winnowing and Industrious Pursuit and Inquest after the more eminent, but Cloudy and Abstruse Causes of Nature, to unlock the Mysteries of them, which are laid up in her Gloomy Cabinet, when he can affiem, that their Operation owes its Original Emanation, or Efflux, to the Supernatural Conduct of an Angel, and thus at last will become the Common Sanctuary to Shelter a Universall Ignorance? Indeed, I do not Deny, but the Hand of Gods speciall Providence is sometimes stretched out and extended to support Nature when she is feeble and faint in her Operations, or else to Knit and Twise Extraordinary Causes with Extraordinary Effects, when she is not able to perfect and perform this union, and then only when she is Defective either in her Strength or in her Light; But to do it always, and Assert that these Ex-

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extraordinary Efforts of Gods, special Providences are visibly manifested at all Times, and in all seasons, is to Ravel and Discompose the Chain of Second Causes, whose Operations are still Interwoven with the Concourse and Concomitance of the First. But the Irregularity of this Opinion will further appear by this Question, Why have not the Baltic, Euxine, and Caspian Seas this Flux and Reflux of waters, by this Angelical Motion; since they are as Capable of it, as other parts of the Ocean abroad, that daily Receiv'd it? Besides, it is Absurd to imagine that Seas divided by such vast Intervals, should at one and the same Instant swell into Tides, and fall into Ebbings, by the Transport and Managery of one single Angel, and yet these waters being equally mov'd, should produce such different Fluxes and Refluxes; And now I hope by this time Wise Men will laugh at this Opinion, not in Applause, but Contempt, of the Vanity of its suppos'd Argument to no purpose also consider howe hardly you can fit it to the world even **The Second Opinion**, Is, that it is to be acknowledg'd that the Earth is not the Cause of the Tides, or of our Countryman Lidet, who avers,

That the Flux and Reflux of the sea, owes its Primitive Efficiency to Subterraneous Fires, Fed and Maintained by a stock either of Sulphurous or else of Bituminous Matter; But this Position of his meets with so many Ruinous and Destructive Difficulties, that it is almost impossible to Reconcile it to Truth; for it is by

all Agreed, That the Flux and Reflux of the Sea, is Periodical in its Revolution, and so determined, fix'd and certain: But if this Opinion of his should be Assented to, where there is not this Collection of Sulphurous and Bituminous Matter (as on the Coast of Norway, and other places) there would be no Tydes at all. Besides, where this Stock of Combustible Matter is wholly wasted and empair'd, The Flux and Reflux of the Sea, must wholly cease: But then ~~adly~~. Why should not the Dead-Sea in Palestine, or the Lake ~~as~~-Phaltites, that has such an eminent congestion of Bitumen transfus'd through the Bowels of it, be Capable of Prodigious Tides? but this we know is Contradicted by all Experience. ~~adly~~. Why should not the Baltic Sea that is replenish'd with many Bituminous particles (as appears from the Generation of Amber, which most do Conclude to be a Coagulum or Concretion of Salt, Sulphur and Bitumen, and which is frequently found upon the Coast of Ließland, Carland, and Prussia) have these Tides and Ebbings which every one knows to be contrary to all Observation? ~~adly~~. Why do not the Tides upon the Coasts of Sicily and Naples, Swell to a very important Height, since both their Circumambient Shores, are bound with such a Copious Quantity of Sulphur? But this we know is evidently false; the Sea not swelling upon those Coasts to a Diameter of above three or four Footh when it is

at the Highest. But last of all, if you ask Di-
diat; what Superior cause Produces these Sub-
terraneous Fires, he will tell you, that is the
Reflexion of the Beams of the Sun upon the
Convex Superficies of the Sea? To this I An-
swer, That by the Consent of many eminent
Philosophers, the Rays of the Sun never ope-
rate by penetration upon that watery Body
above Fifteen Cubies, and so Impossible where
the Sea is of any considerable Depth, to pro-
duce these Subterraneous Fires. And thus, I
think, I have Sufficiently disarm'd his Opin-
tion.

The Third Opinion Is,

THAT The Flux and Reflux of the Sea, is caus'd
by some prodigious Eddies and Whirl-
pools, that suck and transport the Sea from
the North to the South; and from the South
to the North; That there is such a vast whirl-
pool upon the coast of Norway, is most certain,
which is by Mariners Stiled, The Navel of the
Sea: But, that there is such an one in the
Southern Hemisphere to refund back the Sea
by a motion of replication, no Observations
either of Ruyffius, Einschoten; or the more curi-
ous De Lest have ever discovered to us, whose
Searches and Inquisitions into the Mysteries of
the East-Indian and West-Indian Seas, were
never yet cavil'd or quarrel'd at: Besides, If
there were any such in those parts, upon the

reciprocal return of the Southern waters towards the North, that multitude of angry Circles, which discompose, by reason of that Voluminous Whirlpoole, the face of the Norwegian Sea, would every 24 hours disband, and be smooth, as the aspect of peace, and even as the marget of a Poole, when it is not disordered into wrinkles by the rough breath of a ruder Tempest. But this is Contradictory to the daily Observation of the Inhabitants that confined upon the Fringes of this stupendous Whirlpoole.

Thus, I think likewise, this opinion, that is Supported by such feeble Crutches, is at last overturned.

The Fourth Opinion.

But as some have found out a Navel, so *Kepler* hath found out the Lungs of the Sea : for he affeverteth the Terrestrial Globe to be but one great Animal, and that the *Flux and Reflux of the Sea* does proceed from the *Sistole* and *Diabole*, or the Contraction and Expansion of dits Spacious Lungs : But then I ask ; First, Whether does this Motion Result, either from Air, or some Spirit? or Secondly, Does it Issue, either from a Sensitive or Rational Soul? And Thirdly, I enquire upon what Coast these prodigious Lungs are Situated? And until the Abettors of this wild Opinion (if there be any such) do give some Satisfactory Answers to these

these Queries, this Opinion is Demolished by
a bare Negation of it.

The Fifth Opinion, Is,

O F *Picus Mirandula*, that this Increase and Decrease of waters, is caused per Mutuas & Benevolas Aquariorum Aliencias, that is, by a motion of Aggregation or Sympathetical Connexion, by which water does vigorously endeavour to unite and Conbine with water. But if this were granted, Streams would seek to entwine with Streams and Lakes twist with Lakes, till at last, long before this the world must have suffered under the angry Baptisme of a publique Deluge. Secondly, where there is this Motion of Aggregation or Connexion, the Tides would swell to an Important Height, as in the *Caspian*, *Euxine* and *Baltick* Seas, where all Geographers that have display'd to us the Topography of those places, have discover'd to us that a multitude of huge Rivers do daily disemboigne themselves: And on the other side, those Seas that do not swell with the Additional supplies of very few or no Rivers, as the *Norwegian* Ocean, and others, would have very little or no Tides at all. Both which are evidently false, and repugnant to daily Observation. Therefore this Opinion of His, establish'd upon such fraile principles, does easily shrink and languish into its own Ruine.

The

The Sixth Opinion

DOES aver, that the Sea does entitle the Causality of its *Flux and Reflux* to some Currents that either set from East to West, or from North to South: But if this were assented to, the *Red-Sea*, the *Euxine-Sea* and the *Baltick-Sea*, would improve themselves to a huge Increase of Tides, considering all three are fed by a Communication of perpetual Currents: but this is manifestly false, for the *Red-Sea* and *Euxine* have little or no Tides; and the *Baltick-Sea* none at all; Therefore I wave this Opinion as altogether Erroneous.

The Seventh Opinion

ENtitles the Motion of the Earth, to be the Cause of the Motion of the Sea; Those who aber this Opinion, affirm Three things.

First, That the Earth and Sea have but one Center to render the whole Globe more regularly and Uniformly Orbicular, and so more apt for that Motion they are designed to receive.

Secondly, They assert, that every part and particle of this Spherical body is so tyed and threaded together by a magnetical union, that it is Impossible that the least Atome should start out of its natural situation, being fastened and fettered to its station by so inexpugnable a Magnetism.

Thirdly

Thirdly, that its motion is circular; now the *Flux and Reflux of the Sea*, is *motus Transversus*, or a motion of reciprocation and rejection, like water that is jostled and thrown from side to side in a Paile or Bowl: now, if it should move circularly, every part would move so evenly & Magnetically, that there would be no *Flux or Reflux of the Sea* at all. Secondly, since the *Euxine, Baltic and Caspian Seas* are such Considerable parts of this Globous body, they must move equally with it if it move at all; and then why have they not the same *Flux and Reflux* as other Seas have, since they have the same Aptitude, or natural intrin-
sique Capacity, to receive this Motion as other Seas have? But that they have not *Flux or Re-
flux* at all is Demonstratively true. But whether
this Opinion be so or no I refer to the Scruti-
ny of the Judicious Reader: Indeed, I could wish
that those who defend the Motion of the Earth,
would produce more vigorous Arguments to fortify
and secure their Thesis, merely to Subvert
the Popes Infallibility; one of whom, not many
years since, by a Signal Determination and De-
finition ex Catechis, blotted it for Impious
and Heretical, and Condemned the obstinate
Assertors of it, to his truest Purgatory, the Inqui-
sition.

The Eighth Opinion, Is,

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Sun is a partiall, Concurrent or Concomitant cause, I Affirme; But that it is the sole and principal, I deny, and that upon these Foundations, for, if it should be, the tides in the vast Wildernes of the Northern Seas, would upon the *Apogenum*, or Recesse of the Sun, shrink and Contract themselves, for want of his Vigorous Excitation to a Considerable Decrease; and again, upon his *Peregrinum*, or nearest Approach, swell to an Important Magnitude; Both which are evidently false, for it is Generally observ'd, that about the *Autumnall Equinox*, and sometimes after, the Tides in those Seas abovesaid, are Improv'd and Increase to an Extraordinary Height, & on the Contrary, about the *Summer-Solstice*, they suffer a sensible and visible Diminution and Decrease, rather than any Augmentation: both which were absurd to Imagine, if the Sun was the Sole Efficient Cause.

Secondly, why should not the *Caspian*, *Euxine*, & *Baltick* Seas, be Capable of this Motion, since they are also expos'd to the Impressions of the Sun, either perpendicular, or by Vibration, when he is in or near his *Peregrinum*; But this they have not, is Evident, and therefore the Sun is not the Prime, Sole and Efficient cause of the *Flux and Reflux of the Sea*.

The Ninth Opinion, Is,

THAT the Moon is the principal cause of this Marine Motion, that it is a Subservient, Concurrent

current and Oceanic and so I shall Grant; but that it is the sole Efficient is still very affirme, for if it were so it would universally and equally move all Seas, especially when they are under its Perigeeum, and then the Indian, Easian and Caspian Seas would be Capable of this Flow & reflux likewise, But that they are not is apparently Evident, I know it is objected that the Moon hath a principal efficacy in the Flowings of the Sea, because it is observed, that when she is in her Scutell & in her fall, Shee-falls do swell and Increase so as to make Bells and Corporalency; But to this I answer that this is produc'd not by any direct Causallie of the Moon, but only by accidenc, for those great Tides, which have vnder those Times transporne with them a huge Quantitie of Mud & Saling, which creature up a flat Glarie where one juice wherby shellfish greedily sucking in, doth supply of sustaine an Altitudine, & large dimensions to that Dimension they arrive at an holt fould some good bib, alresse, or newt and drake, good salt, & somwhat more Oyl upon the land, & sea, I br. wolf adiu. **The Tenth Opinion.**

W^{ch} Fuddeere to is, that there is a Viscosity, Volatilit or Arsonizant Sift or Soif, that is wrap'd up in the Bowels of the Earth and then there clipp'd up and impell'd unto the mouthes of the firths and Rivers side, which is to be perceiv'd by the Affectio of the Senses of the mouth and the opening of the Eye, the bowels of the Earth being premis'd, the Sun and Moon do draw the same, but by lookinge and seeinge we find no such thinge to be true.

and drags along with it, that Heap of waters we stile the *Flux*, (though I do not Deny but that it is something aided and assisted in this Operation by an Elater or Spring of Air, that being released from its Compression and confinement, ascends up with it,) and upon closing and Contracting its Face upon the Recess of those two great Luminaries, shrinks back again, and with it pulls along that mass of waters it before had elevated, and this produces the *Reflex*. And this Opinion is Supportet by three Experiments: The First is that of *Zaingerus* a modern Chymist cited by *Frixiander* in his Book of Mercuries, who obseru'd that some sort of Chymicall oyle of vitriol did ascend and descend in Times proportionall and adequate to the *Flux and Reflex of the Sea*. The Second is that of *Abraham Kirchner* in his *Mundus Subterraneus*, who there discoures to us, that an Infusion of *Sabarmatick* lodg'd in an open Vessel, and plac'd obliquely to receive the Influence of the Moon, when she was in her Sextile, did Increase and Decrease as if it held an equal Correspondence, by an uninterrupted Chain of Atoms, with the Flowings and Ebbings of the Marine waters. The Third is that of *Grovesick*, *Glasses*, upon whose sides if you beat with Importunate assest, they resist their Impression, but break in at the Top, and it flies in pieces with much violence and tumult: And the Reason is, because the Water and Salt are such that lay impinged, and cleaved in upon the Glass, and Circumference of the Nigros or pure Salt, finding it self enfranchis'd and separated from the strict Bondes of those two other Appendages, Saltes,

fullies out, with an impetuous Eagerness; and that Eruption occasions that disorder and encumbrance now.

But I know it will be objected, why have not the *Euxine*, *Baltick* and *Caspian* Seas their *Offices* and *Depositories* likewise; since it is probable their waters impenetrable as great a stock of vitriolated, volatile, or *Armoniack* Salt as other Seas are encrusted with that have the same Vicissitudes? To this I Answer, that it is as probable they have not; But suppose they had; yet its volatile Spirit is check'd & depriv'd by that multitude of vast and deep Rivers, that perpetually discharge themselves into those Seas above said; And it is likewise possible, that there is a Considerable Quantity of *Sulphur*, *Bitumen*, fixed & Nitrous Salt, conducted along with there Currents, whose fixing Quality may improve the Depression of the Vitriolated and *Armoniack* particles, and so benum their Volatility that it is almost impossible for the united Influences of the Sun & Moon, to excite their so stupified Vigour. But if it be enquir'd how it happens, since so many capacious streams disembogue themselves into those Seas, that the neighbouring Territories, doe not suffer under a constant Inundation? I answer, that the water that is treasur'd up in the Cells and Caverns of the Earth, which it is probable here are more than ordinary copious, entice and allure back the Marine waters, *Per Motum Nexus* by a Motion of Adherence, Aggregation, union and Connexion, and so by a continual Circulation, reimburse, and new Stock the Rivers, with Additional streams which are daily paid in to propuse a Tribute, to the vast Exchequer of their watry Sovereign.

And thus have I as compendiously as might be
wound up this Essay, yet I am not so confident to be-
lieve here that posterity may by these Discoveries, &
Scarcines, for which are not yet made; nor known
ledging these, & thereby implore it no greater Advantage
of the publick, than could be expected from this
faint Recuse of my Pen. In the lastem I shall desire
the Reader to acquiesce in that Amicable and Inge-
nious Determination of the Poet, — *Si quis
scrupulosa ratione in hanc causam, quicquid
adversus eam dicitur, non debet credi.* — And this
I will do, forasmuch as the Author of the Poem, in his
own opinion, makes it a manifest Impossibility for the
Ingenious to believe it to be written by himself. —

I will therefore, who doth not further consider a Contingent I am
desirous, I answer, upon this Matter, if these叙述 in the
diction, I am author, who doth not further consider a Contingent I am
in this Cellebration Causam of the French which in
those places, where the market in certainia col. oes, ex-
cepting such as are placed in certainia Marts, for Marts
whereby a Master of a Mart, or a Master of a Mart
owne one Conuincion, say to a Master of a Mart
journ, leuyngh, say to a Master of a Mart, say to a Master of a Mart
A Master of a Mart, say to a Master of a Mart, say to a Master of a Mart
that a Master of a Mart, say to a Master of a Mart, say to a Master of a Mart

